Title: INTEGRATED MODELING THROUGH SYMBOLIC MANIPULATION

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REMARKS

This is in response to the Office Action mailed on <u>September 26, 2006</u>, and the references cited therewith.

Claims 1-3, 6-8, 11-13, and 15-19 are amended to provide clarity and not in response to art, no claims are canceled, and claim 21 is added; as a result, claims 1-21 are now pending in this application.

§103 Rejection of the Claims

Claims 1-3, 6, 7, 11-13, 15, 16, 19 and 20 were rejected under 35 USC § 103(a) as being unpatentable over Thalhammer-Reyero (U.S. Patent 5,980,096) in view of Datig (U.S. Patent Application 2002/0198697).

The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). To do that the Examiner must show that some objective teaching in the prior art or some knowledge generally available to one of ordinary skill in the art would lead an individual to combine the relevant teaching of the references. *Id*.

The *Fine* court stated that:

Obviousness is tested by "what the combined teaching of the references would have suggested to those of ordinary skill in the art." *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 878 (CCPA 1981)). But it "cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination." *ACS Hosp. Sys.*, 732 F.2d at 1577, 221 USPQ at 933. And "teachings of references can be combined *only* if there is some suggestion or incentive to do so." *Id.* (emphasis in original).

The M.P.E.P. adopts this line of reasoning, stating that

In order for the Examiner to establish a *prima facie* case of obviousness, three base criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the

prior art, and not based on applicant's disclosure. M.P.E.P. § 2142 (citing In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir. 1991)).

Applicants respectfully submit that the Office Action did not make out a prima facie case of obviousness for the reasons stated that, even if combined, Thalhammer-Reyero and Datig cited in the Office Action fail to teach or suggest all of the elements of the claimed invention, and Datig is non-analogous art.

Regarding claim 11

Claim 11 recites:

"11. A system for creating process models, the system comprising:

means for selecting a symbolic generic model for a component represented in a symbolic language;

means for choosing assumptions about a component to be modeled; and means for applying the assumptions to the symbolic generic model to derive a component specific model reflecting the assumptions."

The Office Action indicates that Thalhammer-Reyero patent teaches "means for choosing assumptions about a component to be modeled", but fails to specifically point out which part of Thalhammer-Reyero teaches or suggests any thing corresponding to "assumptions" as recited in claim 11. In Thalhammer-Reyero, Applicants cannot find any thing corresponding to "assumptions" recited in claim 11 (refer to examples illustrated in figures 3-5). Accordingly, Applicants submits that Thalhammer-Reyero does not teach or suggest the feature "means for choosing assumptions about a component to be modeled" as recited in claim 11. Additionally, neither can Applicants find in Datig the feature "means for choosing assumptions about a component to be modeled" as recited in claim 11. Therefore, Applicants submit that neither Thalhammer-Reyero nor Datig teaches or suggest the feature "means for choosing assumptions about a component to be modeled" as recited in claim 11.

Applicants agree with the acknowledgement made in the Office Action that Thalhammer-Reyero does not teach means for selecting a generic model for a component represented in a symbolic language. However, Applicants do not agree with the assertion made in the Office Action, "Datig teaches means for selecting a generic model for a component represented in a symbolic language ... It would have been obvious to one of ordinary skill in the art at the time of

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Applicant's invention to modify the system of Thalhammer-Reyero with the system of Datig that included means for selecting a generic model for a component represented in a symbolic language..."

Applicants submit that Datig cited by the Office Action is non-analogous art of the claimed invention. Analogous art is all art that is either in the field of technology of the claimed invention or deals with the same problem solved by the claimed invention even though outside the field of technology. *In re Wood*, 599 F.2d 1032, 202 USPQ 171 (CCPA 1979). Referring to the abstract of Datig, it can be seen that Datig describes a universal machine translator of arbitrary human languages for translating source languages into target languages. In contrast, claim 11 of the present application recites a system for deriving a component specific model from a generic model. Thus, Datig is not analogous art, and a person of ordinary skill in the art would not think of using the symbolic language mentioned by Datig in the system of claim 11 of the present application, because Datig is not in the field of technology of claim 11, and does not deal with the same problem solved by claim 11. In fact in view of the field of invention of Datig, reproduced below, Applicants fail to understand why anyone of skill in the art would refer to Datig for teaching relating to process modeling as claimed:

"The present invention relates to the creation and use of synthetic forms of existence, or androids, and more specifically relates to the development of a universal epistemological machine in which any forms of the universe, convention technologies included, are represented, embodied and realized as external moments of an infinitely expanding continuum of enabled existential forms, as an alternative approach to resolving the problems of the human condition."

The Office Action indicates that Datig "teaches means for selecting a generic model for a component represented in a symbolic language (Page 84, Para 0604, L1-5; Page 87, Para 0615, L8-12; page 87, Para 0616, L2-5)." Applicants have read these paragraphs, and find them whole lacking in any teaching which would aid in selecting component specific models in process modeling. Paragraph 604 refers to the use of a computer graphics system in a "symbolic form of an enabler's natural language". This is not at all related to process modeling. The referenced language in Paragraph 615 describes an "android's consciousness in its cognitive formulation of

language, or thinking, let us define another collection of programs to generate the symbolic forms of language in the being's perceivable realtiy..." Again, not related to process modeling. The referenced language in Paragraph 616 describes "-allow the being to realize incremental motor shapes, so that what is perceived (in the video camera) is a real, perceivable global shape of the symbolic language." Applicants also fail to see how this related to selecting a generic model for a component represented in a symbolic language in the context of process modeling.

In sum, Applicants respectfully submit that, even if combined, Thalhammer-Reyero and Datig cited in the Office Action fail to teach or suggest all of the elements of claim 11 of the present application, and Datig is non-analogous art, accordingly, Thalhammer-Reyero and Datig do not render claim 11 obvious.

Regarding claims 1 and 19

Claims 1 and 19 contain similar elements as claim 11. Thus, for at least the same reasons discussed for claim 11, Applicants respectfully submit that, even if combined, Thalhammer-Reyero and Datig cited in the Office Action fail to teach or suggest all of the elements of claims 1 or 19 of the present application, and Datig is non-analogous art, accordingly, Thalhammer-Reyero and Datig do not render claims 1 and 19 obvious.

Regarding claims 2-3, 6-7, 12-13, and 15-16

Claims 2-3, 6-7, 12-13, and 15-16 depend, directly or indirectly, on claims 1 and 11 respectively. Thus, for at least the same reasons discussed for claims 1 and 11, Applicants respectfully submit that, even if combined, Thalhammer-Reyero and Datig cited in the Office Action fail to teach or suggest all of the elements of these dependent claims, and Datig is non-analogous art, accordingly, Thalhammer-Reyero and Datig do not render these dependent claims obvious.

Regarding claim 20

Claim 20 recites:

"20. A development environment for process modeling comprising:

a set of generic models, each comprising a environment independent symbolic representation of a component;

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an interface that provides selectable environment specific assumptions for each component to be modeled; and

a set of environment specific representations of the components derived from the generic models based on the assumptions."

The Office Action indicates that Thalhammer-Reyero teaches "an interface that provides selectable environment specific assumptions for each component to be modeled", but fails to specifically point out which part of Thalhammer-Reyero teaches or suggests anything corresponding to "assumptions" recited in claim 20. In Thalhammer-Reyero, Applicants cannot find any thing corresponding to "assumptions" recited in claim 20 (refer to examples illustrated in figures 3-5). Accordingly, Applicants submit that Thalhammer-Reyero does not teach or suggest the feature "an interface that provides selectable environment specific assumptions for each component to be modeled" as recited in claim 20. Additionally, neither can Applicants find in Datig the feature "an interface that provides selectable environment specific assumptions for each component to be modeled" as recited in claim 20. Therefore, Applicants submit that neither Thalhammer-Reyero nor Datig teaches or suggest the feature "an interface that provides selectable environment specific assumptions for each component to be modeled" as recited in claim 20.

Applicants agree with the acknowledgement made in the Office Action that Thalhammer-Reyero does not teach a set of generic models, each comprising an environment independent symbolic representation of a component. However, Applicants do not agree with the assertion made in the Office Action, that "Datig teaches a set of generic models, each comprising an environment independent symbolic representation of a component..."

Applicants submit that Datig cited by the Office Action is non-analogous art of the claimed invention. Analogous art is all art that is either in the field of technology of the claimed invention or deals with the same problem solved by the claimed invention even though outside the field of technology. In re Wood, 599 F.2d 1032, 202 USPQ 171 (CCPA 1979). Refer to the abstract Datig, it can be seen that Datig describes a universal machine translator of arbitrary languages for translating source languages into target languages. In contrast, claim 20 of the present application recites a development environment for process modeling. Thus, Datig is not analogous art, because Datig is neither in the field of technology of claim 20, nor does Datig deal with the same problem solved by claim 20. Process modeling in a development environment is quite different than translating source languages into target languages at least because they do not address similar problems. It is difficult to perceive of a reason to look to language translation references when dealing with process modeling.

In sum, Applicants respectfully submit that, even if combined, Thalhammer-Reyero and Datig cited in the Office Action fail to teach or suggest all of the elements of claim 20 of the present application, and Datig is non-analogous art, accordingly, Thalhammer-Reyero and Datig do not render claim 20 obvious.

Claims 4, 5, 8, 14 and 17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Thalhammer-Reyero (U.S. Patent 5,980,096) in view of Datig (U.S. Patent Application 2002/0198697), and further in view of Tan et al. (U.S. Patent 6,263,255).

Claim 9 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Thalhammer-Reyero (U.S. Patent 5,980,096) in view of Datig (U.S. Patent Application 2002/0198697), and further in view of Schroeder et al. (U.S. Patent 6,535,795).

Claim 10 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Thalhammer-Reyero (U.S. Patent 5,980,096) in view of Datig (U.S. Patent Application 2002/0198697), and further in view of Schroeder et al. (U.S. Patent 6,535,795) and Treiber et al. (U.S. Patent 6,654,649).

Claim 18 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Thalhammer-Reyero (U.S. Patent 5,980,096) in view of Datig (U.S. Patent Application 2002/0198697), and further in view of Tan et al. (U.S. Patent 6,263,255), Schroeder et al. (U.S. Patent 6,535,795) and Treiber et al. (U.S. Patent 6,654,649).

Regarding claims 4-5, 8-10, 14, and 17-18

Claims 4-5, 8-10, 14, and 17-18 depend, directly or indirectly, on claims 1 and 11, respectively. If an independent claim is nonobvious under 35 U.S.C. § 103(a), then any claim depending therefrom is also nonobvious. Thus, Applicants respectfully submit that claims 4-5, 8-10, 14, and 17-18 are patentable.

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Conclusion

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 371-2140 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

VIPIN GOPAL ET AL.

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Date November 18 2006

By

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 28 day of November, 2006. day of November, 2006.

Name

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